

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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APR - 8 1992

Federal Communications Commission
Office of the Secretary

In the Matter of)	
)	
AMENDMENT OF PARTS 2, 22, & 25)	RM-7927
OF THE COMMISSION'S RULES)	
)	Associated PP-28
For an Allocation of Frequencies and)	
Other Rules for a New Nationwide)	
Hybrid Space/Ground Cellular Network)	
for Personal/Mobile Communications)	
Services)	

GTE's COMMENTS

GTE Service Corporation,
on behalf of its affiliated domestic
telephone, equipment, and service
companies

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April 8, 1992

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GTE's COMMENTS

Pursuant to Section 1.405 of the Commission's Rules, 47 C.F.R. Section 1.405, GTE Service Corporation, on behalf of its affiliated domestic telephone, equipment, and service companies ("GTE"), with regard to the Petition for Rulemaking ("Petition") submitted by CELSAT on February 6, 1992, hereby submits the following Comments. CELSAT's Petition was placed on Public Notice March 9, 1992. CELSAT proposes amendment of Parts 2, 22, and 25 of the Commission's Rules to allocate spectrum for a Nationwide hybrid geostationary satellite and ground-cellular network for mobile communications services. CELSAT refers to its system as a Hybrid Personal Communications Network ("HPCN").¹

¹ Associated with its Petition, CELSAT also filed a Request for a Pioneer's Preference ("PP Request"). GTE has separately filed its Opposition to the PP Request. In order to avoid repeating the same discussion here, GTE incorporates by reference its PP Request Opposition herein to the extent that GTE raised issues relating to some of the technical contents of the Petition and PP Request.

DISCUSSION

GTE believes CELSAT has raised numerous issues that would require a Rulemaking to resolve.

In its Petition, CELSAT requests the FCC to allocate between 362 and 417 MHz for its proposed HPCN system. It requests that 32-37 MHz come from the L/S-Band or S-Band, and 330-380 MHz be made available from the 20 and 29 GHz bands. (Petition, p. 1 and Appendix B, p. B-1) Alternatively, if L/S-Band or S-Band spectrum is unavailable, CELSAT requests that consideration be given to allocating a portion of 220 MHz between 1.85 and 2.2 GHz that the FCC has discussed allocating to emerging technologies such as Personal Communications Services ("PCS") or for Personal Communications Networks ("PCN"). (Petition p. 4, footnote 2 and p. 33)

While GTE believes CELSAT has provided a lot of technical description of its proposed "paper" system, there is still a lot of technical information missing. As discussed in GTE's Opposition to CELSAT's PP Request, there are numerous references throughout the Petition and the PP Request to CELSAT's application, CELSAT's request for experimental authority for the satellite portion, CELSAT's request for experimental authority for the terrestrial portion of the network, etc. It appears that a significant amount of technical material has yet to be filed. Thus, it may be that this Petition is premature. While the lack of such information may just delay the Rulemaking process, the lack of a technical feasibility showing should be fatal to CELSAT's PP Request since the Rules mandate such a showing. If CELSAT's proposed service fits the FCC's definition of PCS, then CELSAT's PP Request will be subject to the GEN Docket No. 90-314 cut-off date of May 4, 1992.²

In the context of the Rulemaking, however, it is possible that CELSAT may file this technical material later or with its Reply. GTE believes sufficient technical details

² See FCC Public Notice April 3, 1992.

have been filed to provide an overview of the HPCN system, so that GTE can identify numerous issues that would require a Rulemaking to resolve. For example, the service CELSAT proposes comes within the definition of PCS that the FCC is analyzing in GEN Docket No. 90-314. The FCC has already included Apple's Data PCS proposal in GEN Docket No. 90-314 and it is possible that CELSAT's proposal could be encompassed there also. However, in order not to delay any action the Commission is planning to take in GEN Docket No. 90-314, it may be that CELSAT's proposal comes too late for consideration in the first phase of that Docket.

Alternatively, the Commission may consider CELSAT's proposal as a Mobile Satellite System ("MSS"), outside the scope of GEN Docket No. 90-314, and allow it to have its own Notice of Proposed Rulemaking. However, to the extent spectrum is allocated for one service, it could foreclose its availability for another service. It is worth noting that CELSAT's proposal for spectrum for a satellite service -- which GTE agrees is an inherently national license -- is leveraged to request the FCC for a national license for PCS on the terrestrial portion of CELSAT's network. Scope of geographic license coverage of PCS is one of issues in GEN Docket No. 90-314.

Should the FCC explore CELSAT's proposed system in a Rulemaking, the Commission may wish to critically evaluate whether the terrestrial portion of the system could only be implemented on a national licensing basis. Alternatively, the FCC could require Common Air Interface ("CAI") specifications that would allow handsets to be used on multiple PCS vendors' systems, whether they are terrestrial or space-based. As CELSAT itself acknowledges (PP Request, p. 15), space-based platforms are not the "preferred mode" for predominately voice transactions. CELSAT has also not demonstrated that dual-mode or multi-mode mobile terminals will be any more costly than its proposed terminal.

Since GTE has already raised its concerns about CELSAT's capacity claims and use of non-existent coder hardware in its PP Request Opposition, it will not repeat those issues in detail. However, there are other issues that would need to be explored in a Rulemaking. These include the technical feasibility of the space-segment multi-beam antenna proposed by CELSAT. GTE is not aware of the commercial availability of such antennas and, thus, does not have any manufacturer specifications to use as a benchmark to evaluate CELSAT's claims. Possibly CELSAT's "application" will provide such details.

The details on CELSAT's Code Division Multiple Access ("CDMA") technique would also need to be made available to allow critical review of claimed capabilities and capacities. Comparative costs for ground cells between the L-Band, L/S-Band and 1.85 to 2.2 GHz Band would also assist the Commission in evaluating alternatives. Interference potential of CELSAT's proposed service and other uses and users of the bands will also need to be investigated in the Rulemaking (e.g., Industrial, Scientific and Medical equipment use and Common Carrier microwave users in the 2110-2130 MHz band).

GTE will not separately rebut all the self-serving claims made by CELSAT in describing its system or comparing it to current technology, however, it would be interesting for CELSAT to describe why CDMA on its system offers users privacy while claiming that conventional cellular -- which can also use CDMA -- "cannot offer privacy." (Petition, p. 7) Also, contrary to CELSAT's claims, GTE's Follow-Me-Roaming capability currently allows subscriber's to "automatically receive communications while outside their home system" (Id.) and similar capabilities are already part of current industry standards. CELSAT should try to remain up-to-date with current technology before criticizing it or claiming it cannot do something.

CONCLUSION

The FCC will need to make a threshold decision as to whether the HPCN fits within the definition of PCS as that term is used in GEN Docket No. 90-314. After CELSAT provides the missing technical information referred to in its Petition and PP Request, the FCC should allow another opportunity for public comment. Assuming the HPCN proposal remains viable, it should be analyzed in a Rulemaking. However, the Commission may wish to act on the current record in GEN Docket No. 90-314 and review the HPCN proposal in a later Phase of that proceeding. If the Commission does not draw the line somewhere, there will always be another new proposal to consider.

Respectfully submitted,

GTE Service Corporation,
on behalf of its affiliated
domestic telephone,
equipment, and service companies

By: 

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April 8, 1992

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CERTIFICATE OF SERVICE

I, Jennifer R. McCain, hereby certify that copies of the following "Comments of GTE in Opposition to Celsat's Pioneer's Preference Request" have been mailed by first class United States mail, postage prepaid on the 8th day of April, 1992, to the following parties of Record.

By 
Jennifer R. McCain

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RM-7927
April 7, 1992

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